

CLAIMS

1. A compressor comprising a compression mechanism for compressing working fluid, a rotational motor including a stator, a rotor for driving said compression mechanism and a container for accommodating said compression mechanism and said rotational motor, in which the compressed working fluid flows from said compression mechanism to said rotational motor, wherein a space between said compression mechanism and said rotational motor is defined by a porous member.

2. A compressor comprising a compression mechanism for compressing working fluid, a rotational motor including a stator, a rotor for driving said compression mechanism and a container for accommodating said compression mechanism and said rotational motor, in which said container includes a discharge pipe on the opposite side of said compression mechanism with respect to said rotational motor, and the compressed working fluid flows from said rotational motor to said discharge pipe, wherein a space between said rotational motor and said discharge pipe is defined by a porous member.

3. A compressor comprising a compression mechanism for compressing working fluid, a rotational motor including a stator, a rotor for driving said compression mechanism and a container for accommodating said compression mechanism and said rotational motor, in which said container includes a discharge pipe on the opposite side of said compression mechanism with respect to said rotational motor, and the compressed working fluid flows from said compression mechanism to said discharge pipe through said rotational motor, wherein a space between said compression mechanism and said rotational motor is defined by one of porous members, and a space between said rotational motor and said discharge pipe is defined by the other porous member.

4. A compressor according to any one of claims 1 to 3, wherein said porous member is mounted on an element other than said rotor and a shaft fixed to said rotor.

5. A compressor according to claim 4, wherein said compression mechanism includes a bearing member which supports said shaft, and said porous member is mounted on said bearing member.

6. A compressor according to claim 5, wherein said bearing member includes a projection provided on a side of said rotational motor, and said porous member is mounted on a groove formed in an outer peripheral surface of said projection.

7. A compressor according to claim 4, wherein said porous member is mounted on an inner wall of said container.

8. A compressor according to claim 4, wherein said compression mechanism includes a bearing member which supports said shaft and an auxiliary bearing member which supports said shaft together with said bearing member from both sides of the shaft on the opposite side from the bearing member with respect to said rotor.

9. A compressor according to any one of claims 1 to 3, wherein said porous member is made of porous material such as porous metal, porous resin and the like.

10. A compressor according to claim 9, wherein said porous member is formed into a plate-like shape.

11. A compressor according to claim 9, wherein a central portion of said porous member is thicker than an outer periphery of the porous member.

12. A compressor according to any one of claims 1 to 3,

wherein said porous member is made of mesh such as metal thin wire, glass wool, ceramic wool and the like.

13. A compressor according to claim 12, wherein said mesh is enveloped by a plate member having an opening.

14. A compressor according to claim 12, wherein a central portion of said mesh is higher density than that of an outer periphery of the mesh.

15. A compressor according to any one of claims 1 to 3, wherein said porous member is made of porous plate such as honeycomb, punching metal and the like.

16. A compressor according to claim 15, wherein said porous plate comprises a plurality of porous plates laminated on one another.

17. A compressor according to claim 15, wherein said porous plate has holes, and a diameter of a hole closer to a central portion of said porous plate is smaller than that of a hole closer to an outer periphery of the porous plate.

18. A compressor according to any one of claims 1 to 3, wherein said porous member is made of non-magnetic material.

19. A compressor according to any one of claims 1 to 3, wherein said porous member is made of insulative material.

20. A compressor according to any one of claims 1 to 3, wherein carbon dioxide is used as the working fluid.

21. A compressor according to any one of claims 1 to 3, wherein said compression mechanism is of a rotary type.

22. A compressor according to any one of claims 1 to 3,

wherein said compression mechanism is of a scroll type.